

the children to quarrel. They are, for the most part, finer specimens physically than the unwanted, and therefore more mentally fit for the struggle for place and position in the world. Knowing what love is, they are less likely to err in their own marriages, and thus is perpetuated a strong and worthy line.

For men and women consciously branded with an hereditary taint to forego the pleasure of children in their marriage, is altogether honourable. But, for young people, meditating marriage on an insufficient income, to calmly discuss the expediency of marrying with the idea of having no children, is to me wholly immoral and despicable. Why, indeed, should they marry at all? Such half-marriages must inevitably miss the underlying spirit of such contracts in which love only finds its perfected completion in the new life resulting from such a union. Men and women who marry on the strength of such a previously concerted arrangement are surely "wanting in natural affection lovers of their own selves."

[Discussion is invited.—Editor.]

NOTES OF LESSONS.

[We have thought that it might be of use to our readers (in families and schools) to publish occasionally Notes of Lessons prepared by students of the House of Education for the pupils of the Practising School. We should like to say, however, that such a Lesson is never given as a *tour de force*, but is always an illustration or an expansion of some part of the children's regular studies (in the *Parents' Review School*), of some passage in one or other of their school books.—ED.]

I.

Subject : Latin.

Group : Language. Class III. Time : 30 minutes.

BY CATHERINE L. NELIGAN.

OBJECTS.

- I. To increase the girls' interest in Latin.
- II. To increase the girls' power of reflection by encouraging them to trace the Latin origin of words in our own language.
- III. To improve their Latin pronunciation.
- IV. To facilitate their translation.
- V. To increase their knowledge of Latin grammar.

LESSON.

Step I.—Give the girls a short exercise on the Latin vowels, consonants, and diphthongs, illustrating their approximate sounds on the blackboard as follows :—

Vowels		Sounded as in		Latin example (from lesson)
ā	..	ahā!	..	ārido
ă	..	ăha!	..	ăquillă
ē	..	spāde	..	tēla
ě	..	spěd	..	tamen ;
ī	..	feet	..	ūniversī
ĩ	..	fit	..	ĩd
ō	..	nōte	..	nōtus
ŏ	..	nŏt	..	fovea
ū	..	shōe	..	dūcunt
ũ	..	shŏok	..	apũd
Diphthongs		Sounded as in		Latin example
ae	..	āisle	..	notae
au	..	cow	..	auxilium
oe	..	boil	..	proclium

Step II.—Girls to read the vocabulary, noticing the gender of each word, also those which resemble any of our English words.

Step III.—Girls to read and translate the following Latin sentences:—

Aquilifer tamen nōn timet. In aquam dēsilit. Nostrī student, nam in barbarōs aquilam portat. "Vultis-ne," exclāmat, "aquilam barbarīs prōdere?" Tum nostrī ex nāvibus dēsiliunt. Barbarīs vada nōta sunt, nostris ignōta. Alii equōs incitant et cum nostrīs proclium committunt. Alii in universōs tēla mittunt. Multī Rōmānī summo in periculō sunt. Cāsar id animadvertit. Itaque scaphās armātis complet et nostrīs auxilium submittit.

Step IV.—Grammar questions on verbs and prepositions: In, Ex and Cum. Declension of Is, Ea, Id, to be written on the board and learnt.

Step V.—Girls to write Latin sentences on the board, using words learnt during the lesson, as *Proverb*: "The blind man leads the blind man, and they both fall into the ditch." Our men are in danger. Cāsar notices it, and (he) sends help to our men. The barbarians are in boats. The Romans jump out of the ships on to dry land.

II.

Subject: Picture Talk.

Group: Art. Class II. Time: 20 minutes.

By G. J. HASLAM.

OBJECTS.

- I. To help the children to appreciate Rembrandt and his works.
- II. To increase their power of observation.
- III. To show Rembrandt's chief characteristic as an artist. (Wonderful arrangement of light and shade.)

LESSON.

Step I.—Ask the children to narrate what they know of Rembrandt's life. Supplement by further details. Rembrandt was born at Leyden, in Holland, in 1606. (Use map.) His father was a miller. Rembrandt was sent to the University of Leyden when he was fourteen, for one year. Then for three years he was apprenticed to Jacob van Swanenborch. In the following year he entered Pieter Lastman's studio, where he

remained six months. After this he returned home to "study and practise painting alone, and in his own way." His chief models were the members of his own family and himself. In 1634, he married Saskia. Rembrandt was a poor man, and led rather a sorrowful life. He was much too liberal for his means, and consequently towards the end of his life he became bankrupt. He died 1669.

Step II.—Give each child a reproduction of "The Syndics of the Drapers." Let them study picture well, then remove.

Step III.—Draw a detailed description of picture from the children. Amplify, with questions as far as possible. This picture represents a company of men (drapers) who have come together to discuss the affairs of their trade. Mention the Clothworker's Company of to-day. Notice and account for different expressions on the men's faces. Notice the man with no hat in the background. He is a servant.

Step IV.—Return pictures to children. Ask them what they take to be the chief characteristic of the work (as regards the tones of the painting). The light on the faces, collars and book contrasting with the somewhat dark tones of the rest of the picture. This is so beautifully balanced that not a little piece of light could be taken away without spoiling the whole effect. Help the children to appreciate this quality and ask them if they have noticed this fact in the other Rembrandts they have taken.

Step V.—Let the children draw from memory the leading lines of the picture.

III.

Subject: Literature—Sir Thomas More.

Group: English. Class III. Time: 25 minutes.

By GERTRUDE MAHONY.

OBJECTS.

- I. To increase the girls' knowledge of the life and work of Sir Thomas More.
- II. To interest them in the personal life of Sir Thomas More, and so increase their interest in the history of the period.

- III. To give them a wider knowledge of the Revival of Learning in England.
- IV. To connect the history and literature of the reign of Henry VIII.

LESSON.

Step I.—Ask the girls to give a brief account of Henry VIII.'s reign.

Step II.—Ask them for the names of Henry's chief ministers, and let them relate what they know of Sir Thomas More.

Step III.—Supplement their narrative with a short account of More's life. Sir Thomas More was born in London, in 1478. His father, Sir John More, was Justice of the Queen's Bench, and was a man of character and talent. More received his early education in Latin. At the age of fifteen, he was placed as a page in the household of Archbishop Morton, who often said of More to the nobles who dined with him: "This child here waiting at the table, whoever shall live to see it, will prove a marvellous man." Morton sent him later to Oxford, where he met Colet and Linacre: the latter taught him Greek. On leaving Oxford, he met Erasmus, who became his life-long friend. More, like his father, was a lawyer by profession. In the reign of Henry VII. he became a Member of Parliament, and fourteen years later (1523) Speaker of the House of Commons. In six years' time he was made Lord Chancellor in Wolsey's place, but much against his will, as he had no desire for public life. On the first opportunity he resigned the chancellorship and retired into private life. In 1534, Henry was declared Head of the English Church, but More, refusing to take the Oath of Supremacy, was imprisoned in the Tower for more than a year for high treason. He and Fisher, Bishop of Rochester, were executed on the same charge in 1535. More was twice married. Of all his children he loved his daughter Margaret best. Her devotion to her father was unsurpassed, as one sees when reading *The Household of Sir Thomas More*. It was she who dared to go by night and steal her father's body from the gallows and have it buried. In his personal character More was the most attractive and lovable of men. From Erasmus's sketch of him we realise all his virtues and attractions. Read the

extract from *Erasmus* (Life and Letters) page 111, and from *Green's Shorter History*, page 308, giving a description of his appearance and character. Show the girls the reproduction of More's portrait by Holbein.

Step IV.—Ask the girls what they know of the "New Learning," and show that Sir Thomas More was one of the chief advocates of it in England, with Erasmus and Colet.

Causes of the Revival of Learning.

(a) The fall of Constantinople in 1453 scattered Greek scholars abroad in Europe, who taught and spread their literature.

(b) The discovery of America, exploration of the Indian Sea and other places led men to write books of travel and so gave an impulse to literature.

(c) The invention of printing (earlier) facilitated study by the spread of books.

(d) The spread of Reformed Doctrines led men to study the Bible and afterwards other works.

Step V.—Mention Sir Thomas More's works: *Life of Richard III.* and *Utopia*. The former may be regarded as the first book written in classical English prose. By his *Utopia* More was recognised as one of the most accomplished scholars of the Renaissance. It was written in Latin, in 1516, and translated into English, in 1556. Read an account of *Utopia* from "The Story of the Nations," vol. 63, page 172, and from *Green's History*, page 312. If time, read the description of Cardinal Morton from *Utopia*, page 36, in order to give the girls some idea of the English of the sixteenth century.

IV.

Subject: Algebra.

Group: Mathematics. Class IV. Time: 30 minutes.

By J. H. MORRIS.

OBJECTS.

- I. To introduce simple equations.
- II. To stimulate interest in algebra by showing how easily many problems may be solved.
- III. To encourage accuracy.
- IV. To increase the power of reasoning.

LESSON.

Step I.—Explain that an “equation” asserts that two expressions are equal, but that we do not usually employ the word equation in so wide a sense. Thus the statement $x + 3 + x + 4 = 2x + 7$, which is always true, whatever value x may have, is called an “identical equation” or an “identity.”

Step II.—But certain equations are only true for particular values of the symbols employed. Thus $3x = 6$ is only true when $x = 2$, and is called an “equation of condition” or simply an “equation.”

Step III.—Introduce the solution of an equation in a simple concrete instance. A father is four times as old as his son: in 24 years he will only be twice as old. Find their ages.

Let x years be the son's age.

Then $4x$ years = the father's age.

In 24 years the son will be $x + 24$ and the father $4x + 24$ years old. Therefore by first supposition:—

$$4x + 24 = 2(x + 24)$$

$$4x + 24 = 2x + 48$$

(1)

By this equation (1), taken in the abstract, is meant that if x be replaced by a certain number (in this case the age in years of the son) then the left-hand side of (1) can be transformed into the right by means of the laws of arithmetic or algebra. The object, therefore, is to find the value of x which will make (1) an identity. This is called “solving the equation.”

Although the value of x , which makes (1) an identity, is not known, we proceed to transform the equation on the hypothesis that x has such a value.

For, $4x + 24 = 2x + 48$, and if equals be taken from equals the remainders are equal.

$$\therefore 4x + 24 - (2x + 48) = 4x + 24 - (2x + 48)$$

$$2x = 24$$

But if equals be divided by equals the quotients are equal, therefore dividing by 2: $x = 12$

$\therefore$ the “solution” is $x = 12$, i.e., the boy was 12 years old.

By substituting $x = 12$ in (1) we may show that $4 \times 12 + 24 = 2 \times 12 + 48$, which is described as verifying the solution.

Step IV.—Explain what conclusions may be deduced from this problem.

(1) That the process of solving an equation consists in finding a value for the unknown quantity, such as will make the equation an actual identity.

(2) That in every transformation of the equation we suppose the unknown quantity to have values such that the equation is an identity.

(3) That in each step of the process of solution we deduce from a previous equation (A) another (B) which has all the solution or solutions of (A).

Step V.—Consider the equation $5x = 10$

Dividing both sides by 5 we get $x = 2$

Similarly if $\frac{x}{2} = -8$

Multiplying both sides by 2 we get

$$x = -16.$$

Step VI.—To solve $3x + 15 = x + 25$. Here the unknown quantity occurs on both sides of the equation, but show that any term can be transposed from one side to the other by simply changing its sign. For, subtract x from both sides of the equation and

$$3x + 15 - x = 25$$

Subtract 15 from each side

$$3x - x = 25 - 15$$

Thus it is seen that $+x$ has been removed from one side and appears as $-x$ on the other, and that $+15$ has been removed from one side and appears as -15 on the other. Therefore, we have the rule that any term may be transposed from one side of the equation to the other by changing its sign.

Step VII.—From the last step it follows that we may change the sign of every term in an equation, since this is equivalent to transposing all the terms, and then making the right and left hand members change places. For:—

$$-5x + 10 = -3x - 4$$

Transposing $3x + 4 = 5x - 10$

or $5x - 10 = 3x + 4.$

Step VIII.—Let the girls work out on the blackboard:—

$$(1) 2x + 3 = 16 - (2x - 3)$$

$$(2) 8(x - 1) + 17(x - 3) = 4(4x - 9) + 4$$

Help them to solve

$$(3) \frac{x}{2} - 3 = \frac{x}{4} + \frac{x}{5}$$

by showing them that it is convenient to clear the equation of fractions by multiplying both sides by the L. C. M. of the denominators. Thus, multiplying by 20

$$10x - 60 = 5x + 4x.$$

Step IX.—Draw from the girls the rules for the solution of an equation. First, if necessary, clear of fractions, secondly, transpose all the terms containing the unknown quantity to one side of the equation and the known quantities to the other. Then collect the terms on each side and finally divide both sides by the co-efficient of the unknown quantity, and the value required is obtained.

Step X.—If time let them work two or three easy problems involving simple equations.

(1) One number exceeds another by 5 and their sum is 29; find them.

(2) What two numbers are those whose sum is 58 and difference 28.

OUR WORK.

House of Education.

There are one or two vacancies for non-professional students.

NATIONAL HEALTH SOCIETY CLASS LIST.

C. C. MONRO	MRS. LAIDLAW (M.E.C.)
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We have received from some old students eight dainty volumes of Ruskin's Works, for the College Library: *The Stones of Venice* (three vols.), *The Crown of Wild Olive*, *Lectures on Art*, *The Queen of the Air*, *Mornings in Florence*, *St. Mark's Rest*. Each volume bears the inscription, "From five friends, in memory of Agnes M. Young." We should like to add that the College has seldom had a more loyal and devoted student than the one thus commemorated.

Music for the "Parents' Review" School and other Members of the Union, by MRS. HOWARD GLOVER.

In order to complete the scheme of musical education already set forth in the syllabus of the *Parents' Review* School, it is proposed to publish quarterly in this magazine, a list of six pieces, with which the pupil is to become not only acquainted, but familiar, during the term.

The execution of music, and practice in the technique of the art, is only one side of a musical training. It is also necessary to train the ear to an understanding of the classics, in order that a child may enter into the heritage which genius has bequeathed to him; in order, too, that he should understand and love the literature of music, in the same way that we try to imbue him with an appreciation of all the great masterpieces of writers and painters.

With this end in view, it is suggested that during the coming three months the teacher, parent, or any available friend, should play the following compositions to the children, beginning with one movement if necessary, and gradually extending the *répertoire*, until they become well-known and loved. If no executant is at hand, the services of a pianola need not be disdained, although, of course, it must be regarded as a second best.

A daily musical half-hour of this nature will be found to awaken keen musical enthusiasm in the children, even in those who have shown no aptitude in their music lessons, and the idea of music will be lifted above the drudgery which is inseparable from the practise of technical difficulties.

A clever teacher will further make use of this opportunity for hints on musical form and musical history, as brought out and illustrated in what is being played. The pieces selected might be studied and performed by the more advanced pupils themselves.